Columbia River Hatchery Reform Project

Progress Report

April 17, 2006

Introduction

In 2005, Congress directed NOAA Fisheries to replicate the Puget Sound and coastal Washington hatchery reform project in the Columbia River Basin. The Columbia River Basin Hatchery Reform Project will include a collaborative review of how harvest and hatcheries— particularly federally-funded hatcheries— are affecting the recovery of salmon and steelhead fisheries listed under the Endangered Species Act.

Initial conversations with many key basin leaders highlighted the critical importance of having the Columbia River Hatchery Reform Project incorporate information from and contribute to the on-going initiatives in the Columbia River Basin. These conversations also revealed skepticism about a variety of issues, including whether the review process would be independent and what the mission of this effort would be, especially in an arena where many are suffering from "process fatigue." A number of potential participants wanted some time to determine the extent to which these concerns would affect their willingness to participate. Although concerns remain, there is a growing sense of momentum about how the Hatchery Reform Project could contribute to on-going discussions in the Columbia River Basin.

Consultations during an initial scoping phase resulted in the following recommended approach, outlined in more detail below. First, a Facilitation Team will help with policy development for the Hatchery Reform Project with the assistance of a Steering Committee of key basin leaders, which will help coordinate with the other on-going initiatives. Second, a Science Team will do the technical work to support the scientific review process and develop the analytical tools necessary to implement a performance-based system. The Science Team will work in consultation with the Columbia River Hatchery Scientific Review Group. The eventual goal of the overall Project Team is to create a management approach that allows Tribal, State and Federal managers to effectively manage Columbia River Basin hatcheries to meet conservation and harvest goals consistent with their respective legal responsibilities.

This progress report documents the steps that have contributed to the momentum behind the Columbia River Hatchery Reform Project; briefly summarizes the complexities facing harvest and hatchery reform in the Columbia River Basin; provides an overview of how the Columbia River Hatchery Reform Project will proceed; and outlines the scientific and management framework for this project.

From Mandate to Action:
Scoping a Path for the Columbia River Hatchery Reform Project

To accomplish the Columbia River Hatchery Reform Project, the Pacific States Marine Fisheries Commission hired a Facilitation and Policy Team, led by Jim Waldo of Gordon Thomas Honeywell, to facilitate this open, thorough and independent scientific review informed by the Hatchery Scientific Review Group and its results in the Puget Sound region. Dr. Lars Mobrand, of Mobrand, Jones & Stokes, will be the lead on the Science Team in developing an approach to applying science. Together, Mr. Waldo and Dr. Mobrand identified a team of policy and technical staff (the Project Team) to begin organizing the project work plan.

In the initial phase, the Project Team was asked to:

1) Develop an organizational framework and a work plan for replicating the Puget Sound and coastal Washington hatchery reform project in the Columbia Basin,
2) Establish an initial committee whose members will advise on the coordination of the project;
3) Establish a science team to conduct reviews of hatcheries in the Basin;
4) Develop a survey of the information and analytical tools currently available to assist in the scientific review and management decisions; and
5) Develop recommendations on the structure of contracts to carry out the necessary work.

To determine how best to accomplish these tasks, the Project Team met with as many people representing different interests in the Columbia River system as possible given a relatively short timeframe. These discussions highlighted the extremely complex environment in which the hatchery and harvest review process is proposed. Moving forward on this review required extensive discussion about the independence, scope and relationship of this effort to other efforts in the Basin before people were prepared to make commitments to participate. As people made these commitments, the discussions also led to the identification and refinement of a two-part strategy for moving forward on hatchery and harvest reform.

A. A Brief Review of the Complexities Facing Harvest and Hatchery Reform in the Columbia River Basin

Any effort at hatchery and harvest reform in the Columbia River system faces a complex geographic, political, legal, and biological landscape. Beginning in Canada, the Columbia River then flows through or touches parts of Montana, Idaho, Oregon and Washington. Management of the river system is subject to the politics of federal, tribal, state, and local leaders, each with their own perspective— sometimes similar, sometimes different— on how the river should be managed. Different perspectives also exist within each jurisdiction. For example, the Council for Environmental Quality, the Bonneville Power Administration, the U.S. Army Corps of Engineers, the Bureau of Reclamation, NOAA-Fisheries, and the U.S. Fish and Wildlife Service are some of the federal agencies with critical interests in the Columbia River Basin. In addition to complex politics, there are several on-going court cases that are redefining management of the overall river system. These include the on-going U.S. v. Oregon and the remand of the federal

biological opinion. This operating environment is made more complex by uncertainties in how best to recover threatened and endangered fish species. Numerous studies and processes seek to address this, including the environmental impact statements for federal hatcheries authorized under the Mitchell Act; the Northwest Power Planning and Conservation Council's sub-basin plans; and other efforts for compliance under the Endangered Species Act.

Basin interests have also expressed concerns about continued harvest of listed fish species given the various steps taken to conserve them. The recently proposed shut down of West Coast fisheries from the Klamath Basin highlights these concerns.

Discussions with basin leaders about these complexities suggest several challenges. It is very difficult to make any change in or to this system because there are so many interests and expectations. There are so many past and on-going processes that many key players are suffering "process fatigue"—too many meetings, too much paper work. There will never be enough information. It is easier to find problems than answers; it is easier to veto suggestions than to agree on solutions. Given the complexity of the system, it is difficult for scientists to say with certainty the value of any action. Although they may be willing to identify the risk of taking a particular action, many do not recognize the risk inherent in inaction.

In these discussions, the Project Team also learned of a number of ways that a hatchery reform process would likely fail. For example, a stand alone process that produces another list of recommendations will fail. A hatchery reform process that is somehow "captured" by one of the other on-going initiatives will fail. Announcing that this hatchery reform process is the most important process, or is somehow "in charge", will fail. Waiting for consensus will fail. How then to succeed?

The Project Team recommends that the Hatchery Reform Project be aligned with and add value to the concurrent and complex authorities and initiatives that currently exist in the Columbia River Basin. At the same time, legal judgments will be left to others. The hatchery reform process must be science-based, with goals for all stocks and hatchery programs. There must be some kind of performance-based system that allows strategic planning even within the complexity of the Columbia River system. Such a performance-based system must include tools that allow managers to manage the system, evaluate outcomes, and adapt how they are managing the system over time despite uncertainties in science. Managers need to be able to answer some critical questions: where are we now? Where do we want to be in the long-term? Where are we going to be and what will we have accomplished in the near term (next 10 years or so)? There should be a web-based connection between existing databases. Such information and connections should be created early. This feedback and ideas lead the Project Team to suggest the following organization structure and approach.

B. Suggested Organizational Framework

The Project Team has recommended an organizational framework with two main areas of focus. The first involves the facilitation and policy development for the Hatchery Reform Project in coordination with the other on-going initiatives. The second area of focus will be on the technical work to support the scientific review process and development of the analytical tools necessary to implement a performance-based system. Ultimately, the goal is that this

review will lead to a series of decisions that are a) based on broad policy agreements, and b) supported by consistent technical information about hatcheries, habitat, and harvest.

1. Principles for Moving Forward

The proposed work plan for moving forward with the Columbia Basin Hatchery Review Project contains a number of key elements that can lead to a successful review of hatchery and harvest programs. Fundamentally, the initiative is designed so that policy makers and funders can have confidence that decisions correspond with priorities; that priorities are implemented; and that outcomes are assessed to guide future actions. It is based upon four principles:

1. Clear Objectives: explicit and meaningful articulation of the purpose for each production program.

2. Acceptance of the fact that there is risk from inaction as well as action. It is important to have confidence in moving forward, even in the face of some uncertainty.

3. Ability to regularly and methodically learn and adapt.

4. Development of good decision-making tools.

The project will pursue a series of broad policy agreements among fisheries managers which will be built around a system of scientific and management information about hatcheries, habitat and harvest. Fundamental to the effort will be the decisions of the management authorities in the Basin about the objectives for each salmon and steelhead population and the intended goals of related hatchery programs.

2. Facilitation and Policy Development

The Facilitation Team met with as many key basin leaders as possible given a limited amount of time. These included meetings with tribal, federal, state, and other regional players, a presentation to the Northwest Power Planning and Conservation Council, and a series of meetings in Washington D.C. with elected officials from the Pacific Northwest. Additional consultation with key basin leaders is needed and will continue.

Jim Waldo of Gordon Thomas Honeywell and his staff (the Facilitation Team) will serve as the lead facilitator and policy advisor on this project. They will work with policy advisors, including the proposed Steering Committee described below, and other managers in the Basin to help develop sound policy that complements the scientific and technical work. The experience and knowledge of many individuals within the Basin will be important to successful implementation of scientifically defensible recommendations. The Facilitation Team will also coordinate with other processes, provide strategic advice as the project moves forward, assist in policy development where appropriate, and facilitate meetings of the Columbia River Hatchery Scientific Review Group (HSRG).

Based on the discussions with Basin leaders described above, the Facilitation Team has been working to assemble a Steering Committee made up of experienced leaders with a record of working through complex issues in the Basin. The committee members will provide essential

links and information from and to the other on-going initiatives in the Columbia River Basin. The Facilitation Team has talked with a number of people to determine who will serve on the Hatchery Reform Project Steering Committee. Membership of this Committee will be finalized shortly and an initial meeting will likely be held in May.

Members of the Steering Committee will have a variety of roles. These include:

1. providing advice to the Project Team and the Columbia River Hatchery Scientific Review Group (HSRG) on the coordination and progress of this project;

2. helping to frame the strategy for addressing the overall effort; and

3. keeping their respective governments advised of the progress being made.

Establishing the Steering Committee will ensure that Columbia River Hatchery Reform Project is an effective, collaborative process. Collaboration with the Steering Committee will also help transition the scientific group's recommendations into a performance-based management system that works as a conduit for the managers to implement reforms.

In addition to this Committee, the Facilitation Team and the Columbia River Hatchery Scientific Review Group will work closely with other interested parties to ensure that their needs are addressed. This effort could establish a sounding board, special task groups or ways to augment communication or add needed judgment or expertise to the project.

3. The Columbia River Hatchery Scientific Review Group (HSRG)

The second area of focus is a science team based on the model provided by the Puget Sound Hatchery Scientific Review Group (HSRG). The Columbia River HSRG will be critical to the overall outcome of this Hatchery Review Process given the complexity of the salmonid lifecycle and the various on-going initiatives in the Columbia River Basin.

Over the last two months, the Project Team worked to establish the Columbia River Hatchery Scientific Review Group. Dr. Lars Mobrand also checked on the availability of the existing Puget Sound HSRG group and their willingness to serve on the Columbia River Hatchery Reform Project. All but three of the current HSRG members will be on the scientific review group for the Columbia River Hatchery Reform Project. Of those available, most are very familiar with the Columbia River hatchery programs. Dr. Mobrand has also agreed to be the scientific leader and chair of the Columbia River HSRG. The selection of additional members, who are knowledgeable scientists in the Columbia Basin, is currently underway. Dr. Mobrand is well aware of the need to consult widely and to ensure all appropriate care in finalizing the membership of the Columbia River HSRG because of the critical role of science in the Hatchery Reform Project. The Columbia River HSRG should be confirmed by the end of April and will be using the administrative rules and bylaws that worked well for the existing Puget Sound HSRG because they have proven effective over time.

<u>Summary of Columbia River HSRG Tasks</u>:

1. Build a web-based reporting system based on the Managing for Success prototype

2. Update the AHA model for the Columbia River system.

3. Conduct the first sub-region review.

4. Provide coordination with the NEPA process for the Mitchell Act hatcheries.

5. Establish and maintain a public web site.

The first four of these tasks are discussed in greater detail below.

Task 1: Build Proposed Managing for Success Decision Support System

As a top priority, the Project Team proposes to construct a web-based system that will serve as an access point to the shared information needs of the various initiatives. This system will allow all processes to contribute and share information quickly and efficiently. The proposed Performance Based Management System would build upon the Managing for Success (MFS) prototype developed by the Washington Department of Fish and Wildlife (WDFW) in collaboration with the Puget Sound Hatchery Scientific Review Group (HSRG), the N.W. Power Planning & Conservation Council (NWPCC), and the U.S. Fish & Wildlife Service (USFWS) to bring accountability for decisions and actions, as well as provide a way to track information over long time scales.

The "Managing for Success" prototype is a web-based system that focuses on three key areas: plans (to meet goals), actions, and outcomes. First, it provides managers with planning tools to develop and display goals and specific objectives for hatcheries, habitat, harvest, and hydro. Second, managers can describe and track progress of actions intended to achieve goals, including who is doing what work and who is paying for it. Finally, the MFS data system allows managers to report progress towards goals and specific objectives for all H activities as they monitor actual outcomes and results over time. Together, these three functions allow managers to adapt their practices and implement modifications as they learn what effect their actions had on individual populations.

In the Columbia Basin, the Managing For Success (MFS) data system will be further developed from the current prototype to a fully functional web- based decision support system. This system will be specifically designed to inform management towards an effective and coordinated use of all strategies (habitat, harvest, hatcheries, and hydro) to meet conservation and harvest goals. It will consist of a set of modules that support planning, action implementation, and outcome tracking for the All H strategic elements. It will also contain current status and goals for each fish stock. Goals will be identified at two time frames: short- and long-term. Goals for each term would be provided by the Co-managers and would likely change based on stock importance, funding availability, and other management concerns.

The desired outcome of a MFS system is for managers to be able to:

- Identify and communicate current status and goals for conservation and harvest for each stock.
- Develop and implement a management system that allows for future planning.
- Inform their decisions, predict the value of taking certain actions, track actions and implementation measures, and aid in evaluating results.

- Establish an effective adaptive management decision-making process by allowing incorporation of new information and science on a real-time basis.

Using the MFS in this context will aid in addressing the complexities described above and lead to a performance-based system for hatchery and harvest programs, as well as addressing legal and mitigation responsibilities.

The timing of when information is needed and when it can be supplied is critical. There are several immediate milestones that must be met, and a longer two-year plan. The intent for this dual track timeframe is to assure consistency with these fast track processes (such as the collaborative BiOp Remand) and avoid duplication of effort while pursuing a long-term plan. Coordination with other Basin initiatives is explicitly included in the work plan.

Task 2: Upgrade the AHA Model for the Columbia River Basin

Among the tools used to capture information will be an upgraded version of the All H Analyzer (AHA). Through the use of AHA, four future conditions will be described for each stock and reflect outcomes over periods of time, representing the current condition, and three future alternatives. Precise definitions of these conditions will be developed with guidance from the Steering Committee, NOAA-Fisheries, and others.

Other products can be generated from the AHA tool; for example: the recommendation reports from the Hatchery Review process, custom reports for EIS chapters, information needed for an All H Strategy, and others to be defined during the development of specifications for the Managing for Success system.

Task 3: Conduct First Sub-Region Review

The Hatchery Review is the engine that drives the fact-finding effort in the Basin. The pattern of systematic region-by-region review used to great success in Puget Sound and coastal Washington will be employed. This entails identifying regions within the Basin and then conducting the review of stock goals within that region as they relate to the habitat in which they reside. In Puget Sound and coastal Washington, the co-managers provided information on each stock to the HSRG and then participated in verifying goals. They also were available during the reviews to answer questions and provide additional information as needed. A critical assumption of this plan is that the co-mangers will participate and provide information needed from them in a timely manner.

Task 4: NEPA Technical Support

This task covers coordination with the NEPA process for Mitchell Act hatcheries and provides the fish-related information needed for the Affected Environment, and the Environmental Consequences chapters of the DEIS.

The Columbia River Hatchery Reform Project needs technical work to support the scientific review process and development of the analytical tools necessary to implement a performance-based system that inter-relates. This performance-based system must function in relation to the other on-going initiatives in the Columbia River system. In turn, the scientific framework and management approach will be critical to this process.

C. Scientific and Management Premise for the Columbia River Hatchery Reform Project

A number of scientific and management premises were developed in the Puget Sound hatchery review process and will be used in the Columbia River Hatchery Reform Project. This step-by-step approach for reviewing stock programs, implementing needed actions, and tracking the results of those actions is outlined below.

1. Scientific and Management Premise:

- Hatchery management should be guided by the following three principles:
    1. Goals for all affected stocks should be quantified and expressed in terms of community values (conservation, harvest, education, research, etc.)
    2. The purpose, operation and management of each hatchery program must be scientifically defensible and consistent with current scientific knowledge.
    3. Decisions must be informed and responsive to new scientific information.
- Hatchery programs are tools for meeting explicit goals for harvest and conservation. The expected contribution of hatchery programs toward stock goals must be explicitly stated.
- Hatchery programs should be used as part of an "all H" salmon management strategy to meet resource goals.
- Hatchery programs by their nature are a compromise and should only be used if they are better, in a benefit/risk sense, than alternate strategies for meeting similar goals.
- Hatchery programs are viewed in a regional ecosystem context. Current and expected future conditions of the environment must be taken into account in designing and operating hatchery programs.
- Hatchery management and operations should be guided by science. Basic biological and ecological principles must be applied. The scientific framework should be clearly articulated and documented. The scientific framework should then be challenged and improved over time. The framework identifies the conditions required for a hatchery program to contribute toward harvest and conservation goals.
- Hatchery programs are defined by broodstock origin and release location.
- Hatchery programs are designated as either *integrated* or *segregated*, depending upon the intended genetic relationship to natural stocks originating from the region where hatchery fish are released. The terms *isolated* and *segregated* are equivalent.

2. Scientific Framework and Information Sharing System

In turn, operation of hatcheries consistent with resource goals depends on a scientific framework and system to share information. These requirements include the following:

- A transparent, and actively maintained **Scientific Framework**[1]
- **An Information Sharing System**[2] that provides real time access[3] to reliable information about Goals, Actions, and Outcomes at the ESU, regional, and stock-specific levels.

    1. **A Comprehensive Strategic Plan** that answers the questions where are we currently? Where do we want to be in the future?
    2. **An Overview of Actions** targeting or affecting the stock. What habitat, harvest, and hatchery actions are completed, under way, or planned to move toward the long-term goals?
    3. **A Summary of Outcomes**. Collect and display empirical information that shows if actions are correctly implemented and effective, and if progress is made toward long-term goals for harvest and conservation.

The eventual goal is to have a web-based system in which information can be added, reviewed, and incorporated from the various on-going initiatives in the Columbia River system. The system would allow managers to adapt their activities as they learn more about the impacts of their decisions.

Summary and Next Steps

The goal of the Columbia River Hatchery Reform Project is to build upon and foster the other on-going initiatives in the Columbia River Basin while helping managers begin to assemble more concrete information about harvest and hatcheries. This Project will involve significant consultation with basin leaders and scientists in the days and months ahead. In the next two weeks, the Project Team anticipates finalizing membership in the Steering Committee and Columbia River Hatchery Scientific Review Group, scheduling meetings for both entities, and continuing to consult with Basin leaders on issues important to the outcome of this hatchery and harvest review process.

For questions or comments, please contact

Jim Waldo, Bj Mirk. Gordon Thomas Honeywell. (253) 620-6541 or (253) 620-6422.

Dr. Lars Mobrand, Mobrand, Jones & Stokes. (206) 463-5003.

[1] The Scientific Framework developed by the HSRG should serve as the starting point
[2] The Managing For Success system, including the AHA calculator, is being designed to meet this need.
[3] Different levels of access should be available for different user groups, e.g., regional managers will have access to more detailed and provisional information, whereas public users should have access to summary information that meets defined quality criteria.